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DECLARATION (37 CFR 1.63) FOR UTILITY OR DESIGN APPLICATION **USING AN APPLICATION DATA SHEET (37 CFR 1.76)**

As the below named inventor	(s), I/we declare that:			
This declaration is directed to	;			
. \	The attached applica	ation, or		
	Application No	, filed on,		
	as amended on	(if applicable);		
I/we believe that I/we am/are for which a patent is sought;	the original and first in	ventor(s) of the subject matter which is claimed and		
I/ we have reviewed and u claims, as amended by any a	nderstand the content mendment specifically	s of the above-identified application, including the referred to above;		
known to me/us to be materi	al to patentability as de tween the filing date	States Patent and Trademark Office all information efined in 37 CFR 1.56, including material information of the prior application and the National or PCT oplication, if applicable; and		
All statements made herein of my/own knowledge are true, all statements made herein on information and belief are believed to be true, and further that these statements were made with the knowledge that willful false statements and the like are punishable by fine or imprisonment, or both, under 18 U.S.C. 1001, and may jeopardize the validity of the application or any patent issuing thereon.				
FULL NAME OF INVENTOR(S)			
Inventor one Bevan Sta	ole	Date: 4/13/0 /		
Signature: R h	56-	Citizen of: United States		
Inventor two Richard Ro	ith,			
Signature: Kuchs		Citizen of: United States		
Inventor three		Date:		
Signature:		Citizen of:		
Inventor four		Date:		
Signature:		Citizen of:		
Additional inventors are bein	named on additio	nal form(s) attached hereto.		

Burden Hour Statement: This collection of information is required by 35 U.S.C. 115 and 37 CFR 1.63. The information is used by the public to file (and the PTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This form is estimated to take 1 minute to complete. This time will vary depending upon the needs of the individual case. Any comments on the amount of time you are required to complete this form should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, Washington, DC 20231. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Assistant Commissioner for Patents, Washington, DC 20231. DE 7037404 v1

PTO/SB/81 (10-00) Approved for use through 10/31/2002. OMB 0651-0035

U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE

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POWER OF ATTORNEY OR AUTHORIZATION OF AGENT

Ap	plication Number	Not Yet Assigned	
Fili	ng Date	Not Yet Assigned	
Fire	st Named Inventor	Staple	
Gro	oup Art Unit	Not Yet Assigned	
Exa	aminer Name	Not Yet Assigned	
Atto	orney Docket Number	19930-002500US	

I hereby ap	noint:		· · · · · · · · · · · · · · · · · · ·			
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☐ Practitio	ner(s) named below:					·
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as my/our at Trademark (torney(s) or agent(s) to prop Office connected therewith.	secute the application	identified above	, and to transac	t all business ir	the Patent and
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l <u> </u>	ve-mentioned Customer Nu		-			
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I am the:			<u> </u>			
	ant/inventor.					
- ''	nee of record of the entire in	tornet See 27 CEP 3	71			
	ate under 37 CFR 3.73(b) i			-		•
Certino		GNATURE of Applica		e of Record		-
Name	Network Photonics, Inc.,	by Steven Georgis, Pro	esident .			
Signature	Morra	Ma -				
Date	- July	13-01				
NOTE: Sign:	atures of all the inventors	or assignees of recor	d of the entire	interest or their	representativ	e(s) are required.
Submit multi	ple forms if more than one	e signature is require	d, see below*.			
	one form is submitted.					

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DE 7037405 v1

PTO/SB/96 (08-00)
Approved for use through 10/31/2002. OMB 0651-0031
U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE
Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it displays a valid OMB control number.

STATEMENT UNDER 37 CFR 3.73(b)				
Applicant/Patent Owner: Bevan Staple et al.				
Application No./Patent No.: Not Yet Assigned	Filed/Issue Date: Not Yet Assigned			
- Entitled: MEMS-BASED NONCONTACTING FR	EE-SPACE OPTICAL SWITCH			
Network Photonics, Inc.	, a corporation			
(Name of Assignee)	(Type of Assignee, e.g., corporation, partnership, university, government agency, etc.)			
states that it is:				
1. X the assignee of the entire right, title,	and interest; or			
2. an assignee of an undivided part int	erest			
in the patent application/patent identified above t	by virtue of either:			
A. An assignment from the inventor(s) of the recorded in the Patent and Trademark Off attached.	patent application/patent identified above. The assignment was ice at Reel, Frame, or for which a copy thereof is			
OR	·			
B. A chain of title from the inventor(s), of the shown below:	patent application/patent identified above, to the current assignee as			
1. From:	To:			
	nited States Patent and Trademark Office at			
2. From:	To :			
	nited States Patent and Trademark Office at characteristics of the copy thereof is attached.			
3. From:	То :			
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Additional documents in the chain of	title are listed on a supplemental sheet.			
	No. about a few and about			
○ Copies of assignments or other documents in [NOTE: A separate copy (i.e., the original assembly must be submitted to Assignment Division in recorded in the records of the USPTO. See Management Note:	signment document or a true copy of the original document) accordance with 37 CFR Part 3, if the assignment is to be			
The undersigned (whose title is supplied below)	is empowered to sign this statement on behalf of the assignee.			
4-13-01	Mad Da			
Date	Signature			
	Steven Georgis			
	Typed or printed name			
	President			
	Title			

Burden Hour Statement: This form is estimated to take 0.2 hours to complete. Time will vary depending upon the needs of the individual case. Any comments on the amount of time you are required to complete this form should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, Washington, DC 20231. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Assistant Commissioner for Patents, Washington, DC 20231.



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ASSISTANT SECRETARY AND COMMISSIONER OF PATENTS AND TRADEMARKS Washington, D.C. 20231

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SEPTEMBER 27, 2001

PTAS

TOWNSEND AND TOWNSEND AND CREW LLP
PATRICK M. BOUCHER
TWO EMBARCADERO CENTER
EIGHTH FLOOR
SAN FRANCISCO, CA 94111

PM Bruchez *101779276

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RECORDATION DATE: 07/03/2001

REEL/FRAME: 012000/0533

NUMBER OF PAGES: 5

BRIEF: ASSIGNMENT OF ASSIGNOR'S INTEREST (SEE DOCUMENT FOR DETAILS).

ASSIGNOR:

STAPLE, BEVAN

DOC DATE: 04/13/2001

ASSIGNOR:

ROTH, RICHARD

DOC DATE: 04/13/2001

ASSIGNEE:

NETWORK PHOTONICS, INC. 4775 WALNUT STREET BOULDER, COLORADO 80301

SERIAL NUMBER: 09899002

PATENT NUMBER:

FILING DATE: 07/03/2001

ISSUE DATE:

MARCUS KIRK, EXAMINER
ASSIGNMENT DIVISION
OFFICE OF PUBLIC RECORDS

FORM PTO-1619A Expires 06/30/99 OMB 0651-0027

07-18-2001



U.S. Department of Commerce Patent and Trademark Office **PATENT**

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			orney Docket No. 19930-002500US
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	Document ID #	☐ License ☐ Change	of Name
į	Correction of PTO Error Reel # Frame #	☐ Merger ☐ Other U.S. Gove	rnment
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·	Conveying Party(ies)	Mark if additional names of conveying	Execution Date
	Name (line 1) Bevan Staple		Month Day Year 04 13 01
	Name (line 2)		
	Second Party	:	Execution Date Month Day Year
	Name (line 1) Richard Roth		04 13 01
	Name (line 2)	1877002	
	Receiving Party	Mark if additional names	of receiving parties attached
-	Name (line 1) Network Photonics, Inc.		If document to be recorded is an assignment and the
	Name (line 2)	·	receiving party is not domiciled in the United States, an appointment of a domestic
•	Address (line 1) 4775 Walnut Street		representative is attached. (Designation must be a
	Address (line 2)		separate document from Assignment.)
	Address (line 3) Boulder	СО	80301
	City Domestic Representative Name and Add	State/Country ress Enter for the first Receiv	Zip Code
	Name [
	Address (line 1)		
	Address (line 2)		
	Address (line 3)		
/	Address (line 4)		
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U.S. Department of Commerce Page 2 Patent and Trademark Office FORM PTO-1619B **PATENT** Expires 06/30/99 OMB 0651-0027 (303) 571-4000 Correspondent Name and Address Area Code and Telephone Number Patrick M. Boucher Address (line 1) Townsend and Townsend and Crew LLP Address (line 2) Two Embarcadero Center Address (line 3) Eighth Floor Address (line 4) San Francisco, CA 94111 **Pages** Enter the total number of pages of the attached conveyance document including any attachments Application Number(s) or Patent Number(s) Mark if additional numbers attached. Enter either the Patent Application Number or the Patent Number (DO NOT ENTER BOTH numbers for the same property). Patent Application Number(s) Patent Number(s) If this document is being filed together with a <u>new Patent Application</u>, enter the date the patent application was Month Day Year 04 13 01 signed by the first named executing inventor. Patent Cooperation Treaty (PCT) PCT **PCT** PCT **Enter PCT application number** only if a U.S. Application Number has not been assigned. PCT PCT PCT **Number of Properties** Enter the total number of properties involved. Fee Amount for Properties Listed (37 CFR 3.41): \$ 40 Fee Amount **Method of Payment:** Enclosed [Deposit Account **Deposit Account** Enter for payment by deposit account or if additional fees can be charged to the account.) 20-1430 **Deposit Account Number:** Authorization to charge additional fees: No 🗌 Yes 🗌 Statement and Signature To the best of my knowledge and belief, the foregoing information is true and correct and any attached copy is a true copy of the original document. Charges to deposit account are authorized, as indicated herein.

Patrick M. Boucher (Reg. No. 44,037)

Name of Person Signing

Attorney Docket No.: 19930-002500US

ASSIGNMENT OF PATENT APPLICATION:

JOINT

WHEREAS, Bevan Staple, of 2424 9th Avenue, Apartment 7205, Longmont, CO, 80503, and Richard Roth, of 1947 Oak Avenue, Boulder, CO 80304, hereinafter referred to as "Assignors," are the inventors of the invention described and set forth in the below-identified application for United States Letters Patent:

Title of Invention:

MEMS-BASED NONCONTACTING FREE-SPACE

OPTICAL SWITCH

Date(s) of execution of Declaration: April 13, 2001

Filing Date:

1 1

Application No.:

; and

WHEREAS, Network Photonics, Inc., of 4775 Walnut Street, Boulder, CO, 80301, hereinafter referred to as "ASSIGNEE," is desirous of acquiring an interest in the invention and application and in any U.S. Letters Patent and Registrations which may be granted on the same;

For good and valuable consideration, receipt of which is hereby acknowledged by Assignors, Assignors have assigned, and by these presents do assign to Assignee all right, title and interest in and to the invention and application and to all foreign counterparts (including patent, utility model and industrial designs), and in and to any Letters Patent and Registrations which may hereafter be granted on the same in the United States and all countries throughout the world, and to claim the priority from the application as provided by the Paris Convention. The right, title and interest is to be held and enjoyed by Assignee and Assignee's successors and assigns as fully and exclusively as it would have been held and enjoyed by Assignors had this Assignment not been made, for the full term of any Letters Patent and Registrations which may be granted thereon, or of any division, renewal, continuation in whole or in part, substitution, conversion, reissue, prolongation or extension thereof.

Assignors further agree that they will, without charge to Assignee, but at Assignee's expense, (a) cooperate with Assignee in the prosecution of U.S. Patent applications and foreign counterparts on the invention and any improvements, (b) execute, verify, acknowledge and deliver all such further papers, including patent applications and instruments of transfer, and (c) perform such other acts as Assignee lawfully may request to obtain or maintain Letters Patent and Registrations for the invention and improvements in any and all countries, and to vest title thereto in Assignee, or Assignee's successors and assigns.

Assignors hereby authorize and request Townsend and Townsend and Crew LLP, Two Embarcadero Center, 8th Floor, San Francisco, CA 94111-3834, to insert herein above the application number and filing date of said application when known.

Attorney Docket No.: 19930-002500US Page 3
Dated: April 13, 2001 Richard Roth
STATE OF COLORADO)
COUNTY OF Boulder) ss.
personally appeared Richard Roth, personally known to the (or proved to me on the basis of satisfactory evidence) to be the person whose name is subscribed to the within instrument, and acknowledged to me that he/she executed the same in his/her authorized capacity, and that by his/her signature on the instrument the person, or the entity upon behalf of which the person acted, executed the instrument.
WITNESS my hand and official seal.
Lothy D. Jongales
My Commission Expires April 7, 2004 My Commission Expires: Boulder CO 80301

DE 7037413 v1

Assignment Attorney Docket No.: 19930-002500US

Page 2

IN TESTIMONY WHEREOF, Assignors have signed their names on the dates indicated.

Dated: 4/13/01	Bevan Staple
STATE OF COLORADO) ss.	
personally appeared <u>Bevan Staple</u> satisfactory evidence) to be the person whose nar	, before me, Kothy L. Gonzales, personally known to me (or proved to me on the basis of me is subscribed to the within instrument, and acknowledged to me ized capacity, and that by his/her signature on the instrument the son acted, executed the instrument.
WIIVESS my hand and Official scal.	



兀卫 29, 2003

TOWNSEND AND TOWNSEND AND CREW LLP DAVID N. SLONE TWO EMBARCADERO CENTER, 8TH FLOOR SAN FRANCISCO, CA 94111-3834

UNITED STATES DEPARTMENT OF COMMERCE Patent and Trademark Office ASSISTANT SECRETARY AND COMMISSIONER OF PATENTS AND TRADEMARKS Washington, D.C. 20231

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RECORDATION DATE: 07/25/2003

REEL/FRAME: 013828/0575

NUMBER OF PAGES: 11

BRIEF: ASSIGNMENT OF ASSIGNOR'S INTEREST (SEE DOCUMENT FOR DETAILS).

ASSIGNOR:

NETWORK PHOTONICS, INC.

DOC DATE: 06/17/2003

ASSIGNEE:

PTS CORPORATION, A DELAWARE CORPORATION 101 INNOVATION DRIVE SAN JOSE, CALIFORNIA 95134

SERIAL NUMBER: 10148710

FILING DATE: 11/18/2002

ISSUE DATE:

PATENT NUMBER:

FILING DATE: 10/21/2002

ISSUE DATE:

SERIAL NUMBER: 10278182 PATENT NUMBER:

SERIAL NUMBER: 09551256

FILING DATE: 04/18/2000

PATENT NUMBER:

ISSUE DATE:

SERIAL NUMBER: 09658158

FILING DATE: 09/08/2000

PATENT NUMBER:

ISSUE DATE:

013828/0575 PAGE 2

SERIAL NUMBER: 09747064 FILING DATE: 12/20/2000

PATENT NUMBER: ISSUE DATE:

SERIAL NUMBER: 10241105 FILING DATE: 09/10/2002

PATENT NUMBER: ISSUE DATE:

SERIAL NUMBER: 09706489 FILING DATE: 11/03/2000

PATENT NUMBER: ISSUE DATE:

SERIAL NUMBER: 10076182 FILING DATE: 02/12/2002

PATENT NUMBER: ISSUE DATE:

SERIAL NUMBER: 10171434 FILING DATE: 06/12/2002

PATENT NUMBER: ISSUE DATE:

SERIAL NUMBER: 603 63724 FILING DATE: 03/11/2002

PATENT NUMBER: ISSUE DATE:

SERIAL NUMBER: 10243924 FILING DATE: 09/12/2002

PATENT NUMBER: ISSUE DATE:

SERIAL NUMBER: 09782882 FILING DATE: 02/13/2001

PATENT NUMBER: ISSUE DATE:

SERIAL NUMBER: 09859069 FILING DATE: 05/15/2001

PATENT NUMBER: ISSUE DATE:

SERIAL NUMBER: 10161838 FILING DATE: 06/03/2002

PATENT NUMBER: ISSUE DATE:

SERIAL NUMBER: 60252784 FILING DATE: 11/22/2000

PATENT NUMBER: ISSUE DATE:

SERIAL NUMBER: 09799916 FILING DATE: 03/05/2001

PATENT NUMBER: ISSUE DATE:

SERIAL NUMBER: 09899013 FILING DATE: 07/03/2001

PATENT NUMBER: ISSUE DATE:

SERIAL NUMBER: 09899002 FILING DATE: 07/03/2001

PATENT NUMBER: ISSUE DATE:

SERIAL NUMBER: 09899001 FILING DATE: 07/03/2001

PATENT NUMBER: ISSUE DATE:

SERIAL NUMBER: 10300438 FILING DATE: 11/19/2002

PATENT NUMBER: ISSUE DATE:

SERIAL NUMBER: 10087040 FILING DATE: 02/28/2002

PATENT NUMBER: ISSUE DATE:

SERIAL NUMBER: 09899014 FILING DATE: 07/03/2001

PATENT NUMBER: ISSUE DATE:

013828/0575 PAGE 3

SERIAL NUMBER: 09898988

PATENT NUMBER:

SERIAL NUMBER: 09899104

PATENT NUMBER:

SERIAL NUMBER: 09880230

PATENT NUMBER: 6600591

SERIAL NUMBER: 09954662

PATENT NUMBER:

SERIAL NUMBER: 10216600

PATENT NUMBER:

SERIAL NUMBER: 09941325

PATENT NUMBER:

SERIAL NUMBER: 10093844

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SERIAL NUMBER: 10279388

PATENT NUMBER:

SERIAL NUMBER: 09992087

PATENT NUMBER:

SERIAL NUMBER: 09992849

PATENT NUMBER:

SERIAL NUMBER: 10118070

PATENT NUMBER:

SERIAL NUMBER: 10099392

PATENT NUMBER:

SERIAL NUMBER: 10098805

PATENT NUMBER:

SERIAL NUMBER: 10306826

PATENT NUMBER:

SERIAL NUMBER: 10808789

PATENT NUMBER:

SERIAL NUMBER: 10095794

PATENT NUMBER:

SERIAL NUMBER: 10093843

PATENT NUMBER:

SERIAL NUMBER: 10150810

PATENT NUMBER:

FILING DATE: 07/03/2001

ISSUE DATE:

FILING DATE: 07/06/2001

ISSUE DATE:

FILING DATE: 06/12/2001

ISSUE DATE: 07/29/2003

FILING DATE: 09/12/2001

TSSUE DATE:

FILING DATE: 08/09/2002

ISSUE DATE:

FILING DATE: 08/28/2001

ISSUE DATE:

FILING DATE: 03/08/2002

ISSUE DATE:

FILING DATE: 10/23/2002

ISSUE DATE:

FILING DATE: 11/12/2001

ISSUE DATE:

FILING DATE: 11/12/2001

ISSUE DATE:

FILING DATE: 04/05/2002

ISSUE DATE:

FILING DATE: 03/13/2002

ISSUE DATE:

FILING DATE: 03/13/2002

ISSUE DATE:

FILING DATE: 11/26/2002

ISSUE DATE:

FILING DATE:

ISSUE DATE:

FILING DATE: 03/11/2002

ISSUE DATE:

FILING DATE: 03/08/2002

ISSUE DATE:

FILING DATE: 05/17/2002

ISSUE DATE:

013828/0575 PAGE 4

SERIAL NUMBER: 10126189

PATENT NUMBER:

SERIAL NUMBER: 10401416

PATENT NUMBER:

SERIAL NUMBER: 10147181

PATENT NUMBER:

SERIAL NUMBER: 10242213

PATENT NUMBER:

SERIAL NUMBER: 10262404

PATENT NUMBER:

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SERIAL NUMBER: 09745459

PATENT NUMBER: 6535664

SERIAL NUMBER: 09615300

PATENT NUMBER: 6449096

SERIAL NUMBER: 09669758

PATENT NUMBER: 6517734

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PATENT NUMBER: 6490089

SERIAL NUMBER: 06275888

PATENT NUMBER: 4381387

SERIAL NUMBER: 09837362

PATENT NUMBER: 6525352

SERIAL NUMBER: 09899000

PATENT NUMBER: 6535319

SERIAL NUMBER: 09941998

PATENT NUMBER: 6439728

FILING DATE: 04/19/2002

ISSUE DATE:

FILING DATE: 03/28/2003

ISSUE DATE:

FILING DATE: 05/15/2002

ISSUE DATE:

FILING DATE: 09/12/2002

ISSUE DATE:

FILING DATE: 09/30/2002

ISSUE DATE:

FILING DATE: 11/16/1999

ISSUE DATE: 12/31/2002

FILING DATE: 12/20/2000

ISSUE DATE: 04/01/2003

FILING DATE: 12/20/2000

ISSUE DATE: 03/18/2003

FILING DATE: 07/13/2000

ISSUE DATE: 09/10/2002

FILING DATE: 09/26/2000

ISSUE DATE: 02/11/2003

* FILING DATE: 12/21/2000

ISSUE DATE: 12/03/2002

FILING DATE: 06/22/1981

ISSUE DATE: 04/26/1983

FILING DATE: 04/18/2001

ISSUE DATE: 02/25/2003

FILING DATE: 07/03/2001

ISSUE DATE: 03/18/2003

FILING DATE: 08/28/2001

ISSUE DATE: 08/27/2002

SHARON LATIMER, EXAMINER ASSIGNMENT DIVISION OFFICE OF PUBLIC RECORDS 700037867

NO.272

P.4/14

Attorney Docket No. 019930-000000US

Form PTO-1595 Recordation Form (Rev. 10-02) PATENTS	U > Material Dr. Leaders and Children
	Y Y Y
Tab settings ⇔⇔ ▼ ▼ ▼ ▼ To the Honorable Commissioner of Patents and Trademarks.	Please record the attached original documents or copy thereof
Name of conveying party(les):	2. Name and address of receiving party(ies)
Network Photonics, Inc.	Name: PTS Corporation
Additional name(s) of conveying party(ies) attached? Yes No.	Internal Address: A Delaware Corporation
3. Nature of conveyance:	Street Address: 101 Innovation Drive
	City: San Jose State: CA ZIP: 95134
Other:	Additional name(s) and address(es) attached? Yes No
Execution Date: June 17, 2003	
Application number(s) or patent number(s):	1
If this document is being filed together with a new application, th	e execution date of the application is:
A. Patent Application No(s): 10/148,710 10/278,182 09/551,256 09/658,158 09/747,064 Additional numbers atts 5. Name and address of party to whom correspondence concerning document should be mailed: Name: David N. Slone TOWNSEND AND TOWNSEND AND CREW LLP Two Embarcadero Center, 8th Floor San Francisco, California 94111-3834 (650) 326-2400	B. Patent No(s): 6,501,877 6,542,657 6,535,664 6,449,096 6,517,734 ached? ☑ Yes ☐ No 6. Total number of applications and patents involved: 55 7. Total fee (37 CFR 3.41):
	(Altach duplicate copy of this page if paying by deposit account)
no Not USI	E THIS SPACE
9. Statement and signature. To the best of my knowledge and belief, the foregoing informalis a true copy of the original document. David N. Slone	tion is true and correct and any attached copy July 25, 2003
Atty. Reg. No. 28,572	Signature Date

JUL.25.2003

TTC-PA 650-326-2422

NO.272 P.5/14

Form PTO-1585 Recordation Form Cover Sheet Patents Only Page 2

- Additional name(s) of conveying party(ies): (Continued from Page 1)
- Additional name(s) and address(es) of receiving party(jes): (Continued from Page 1)
- Additional application number(s) or patent number(s): (Continued from Page 1) $\,$

A. Patent Application No.(s)
10/241,105
09/706,489
10/076,182
10/171,434
60/363,724
10/243,924
09/782,882
09/859,069
10/161,838
60/252,784
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B. Patent No.(s) 6,490,089 6,381,387 6,525,352 6,535,319 6,439,728

EXHIBIT 3.02(b)

PATENT ASSIGNMENT

ASSIGNMENT AND TRANSFER OF PATENTS

WHEREAS, Network Photonics, Inc., a Delaware corporation, with offices at 4775 Walnut Street, Boulder, Colorado 80301 ("Assignor") owns certain patent applications and/or registrations, as listed in Exhibit A attached hereto and incorporated herein by this reference ("Patents"); and

WHEREAS, PTS Corporation, a Delaware corporation, with offices at 101 Innovation Drive, San Jose, California 95134 ("Assignee"), desires to acquire all of the right, title and interest of Assignor in, to and under the Patents;

WHEREAS, Assignor and Assignee have entered into a certain Asset Purchase Agreement, dated as of June 17, 2003 ("Assignment Agreement"), assigning, among other things, all right, title and interest in, to and under the Patents and in, to and under the registrations for same from Assignor to Assignee;

NOW, THEREFORE, for good and valuable consideration described in the Assignment Agreement, the receipt and sufficiency of which are hereby acknowledged, Assignor does hereby irrevocably sell, assign, transfer and convey unto Assignee all of its right, title and interest in and to the Patents, including all patent applications and divisions, continuations, continuations-in-part, reexaminations, substitutions, reissues, extensions and renewals of the applications and registrations for the Patents (and the right to apply for any of the foregoing); all rights to causes of action and remedies related thereto (including, without limitation, the right to sue for past, present or future infringement, misappropriation or violation of rights related to the foregoing); and any and all other rights and interests arising out of, in connection with or in relation to the Patents throughout the universe, including without limitation all foreign counterparts and foreign equivalents of any of the foregoing.

Assignor authorizes and requests the patent officials in the United States and in any and all foreign jurisdictions to issue any and all letters patent and foreign counterparts or equivalents thereof to PTS Corporation, as assignee of the entire interest of Assignor therein, and covenants that Assignor has full right to convey the entire interest herein assigned and that Assignor has not executed and will not execute any agreements in conflict herewith.

Assignor further agrees, for itself, its successors and assigns, to execute such further documents and to perform such further lawful acts as may reasonably be required to effectuate this assignment.

IN WITNESS WHEREOF, Assignor has caused this assignment to be duly executed by an authorized officer on this 17^{+h} day of June, 2003.

•	
Network Photonics, Inc.	
By: 1 MM fed Name: Steve Centry 1 Title: 1 rendend of CEN	
STATE OF <u>Colorado</u>) ss.	
On June 17, 2003, before me, the undersigned State, personally appeared 5 teve Georgis	notary public in and for said County and
personally known to r proved to me on the b	me [or] asis of satisfactory evidence
to be the person(s) whose name(s) Steve Georgia acknowledged to me that Steve Georgia exect authorized capacity(ies) and that, by Nis the entity(ies) upon behalf of which the person(s) acted	uted the same in <u>his</u> signature(s) on the instrument, the person(s) o
Witness my hand and official seal. SAVOR OTAR DE LOS COLORS OF COLORS	My commission expires on April 7, 2004 Kathy L. Sanderson 4775 Walnuts Street Boulder, CO 80301
My Commission Expires 04/07/04	Dillow 1, CO 00221

EXHIBIT A

PATENTS

TTC Ref Country				Filing		
ATTY(s) Handling	Title	Inventor	Application No.	Date	Patent No.	Issue Dat
019930-000100	Wavelength Router	Weverka, Robert T.	09/442061	11/16/1999	6501877	12/31/200
US		D 1 D 2 46				ļ
(DNS)		Roth, Richard S.				<u> </u>
019930-000110 CA	Wavelength Router	Weverka, Robert T.	2389622	11/14/2000		
(DNS)		Georgis, Steven P.		}		
		Roth, Richard S.				
019930-000110 CN	Wavelength Router	Weverka, Robert T.	00815769.3	11/14/2000		
(DNS)	·.	Georgis, Steven P.	· ·		,	1
		Roth, Richard S.		İ	ļ 	· _
019930-000110 EP	Wavelength Router	Weverka, Robert T.	00983709.7	11/14/2000		
(DNS)	,	Georgis, Steven P.				
•	·	Roth, Richard S.				
019930-000110 JP	Wavelength Router	Weverka, Robert T.	2001-538854	11/14/2000		
(DNS)		Georgis, Steven P.]		,	
		Roth, Richard S.			'	
019930-000110 PC	Wavelength Router	Weverka, Robert T.	00/31448	11/14/2000		
(DNS)		Georgis, Steven P.			ļ.	ł
	. ,	Roth, Richard S.		ļ		
019930-000110 US	Wavelength Router	Weverka, Robert T.	10/148710	5/29/2002		
(DNS)		Georgis, Steven P.				
		Roth, Richard S.				1
019930-000120 US	Wavelength Router	Weverka, Robert T.	10/278182	10/21/2002		
(DNS)		Georgis, Steven P.				· ·
		Roth, Richard S.				}
019930-000200 CA	Wavelength Monitor for WDM Systems	Georgis, Steven P.	2406369	3/22/2001		
(DNS)		Weverka, Robert T.				
019930-000200 CN	Wavelength Monitor for WDM Systems	· Georgis, Steven P.	1811343.5	3/22/2001		
(DNS)		Weverka, Robert T.	}			
019930-000200 EP	Wavelength Monitor for WDM Systems	Georgis, Steven P.	01928317.5	3/22/2001		
(DNS)		Weverka, Robert T.				
019930-000200 JP	Wavelength Monitor for WDM Systems	Georgis, Steven P.	2001-576415	3/22/2001	1	
(DNS)		Weverka, Robert T.				

TTC Ref						
Country ATTY(s) Handling	Title	Inventor	Application No.	Filing Date	Patent No.	Issue Date
019930-000200	Wavelength Monitor for WDM	Georgis, Steven P.	PCT/US01/09442	3/22/2001		
PC	Systems					
(DNS)		Weverka, Robert T.				
019930-000200	Wavelength Monitor for WDM Systems	Georgis, Steven P.	09/551256	4/18/2000		
US	Systems	Weverka, Robert T.	1			
(DNS) 019930-000500	Linear Optical Beam Translator for	Weaver, Samuel P.	09/658158	9/8/2000		·
US .	Optical Routing	· · · · ·	03/030130	310/2000		
PMB (DNS)		Weverka, Robert T.		,		
		Roth, Richard S.				
019930-000510 PC	Linear Optical Beam Translator For Optical Routing	Weaver, Samuel P.	01/28309	9/7/2001 .		
PMB (DNS)		Weverka, Robert T.				
		Roth, Richard S.				
019930-000600 PC	Binary Switch for an Optical Wavelength Router	Anderson, Robert L	01/50524	12/20/2001		
PMB (DNS)						
019930-000600	Binary Switch for an Optical Wavelength Router	Anderson, Robert L.	09/745760	12/20/2000	6542657	4/1/2003
US DAR (DNS)	Wavelength Notice			ļ		
PMB (DNS) 019930-000700	1X2 Optical Wavelength Router	Anderson, Robert L.	01/50441	12/20/2001		
PC	1A2 Optical Wavelength Route	7,110011011, 1100011 0.				
PMB (DNS)						
019930-000700 US	1X2 Optical Wavelength Router	Anderson, Robert L.	09/745459	12/20/2000	6535664	3/18/2003
PMB (DNS)	ì		1.			
019930-000800 US	Wavelength Router with Staggered Input-Output Fibers	Anderson, Robert L.	09/747064	12/20/2000		
PMB (DNS)	-	Weaver, Samuel P.				
019930-000900 US	Diffraction Grating with Reduced Polarization-Dependent Loss	Fabiny, Larry	09/615300	7/13/2000	6449096	9/10/2002
PMB (DNS)	·	Sarto, Tony				
019930-000910 US	Grating Fabrication Process Using Combined Crystalline- Dependent &	Muller, Lilac	09/669758	9/26/2000	6517734	2/11/200
PMB (DNS)	Crystalline-Independent Etching	Arnett, Kenneth E.				
		Fabiny, Larry	·		1 ·	1.
		Pister, Kristofer S.				
019930-000920 US	Diffraction Grating with Reduced Polarization-Dependent Loss	Fabiny, Larry	09/748687	12/21/2000	6490089	.12/3/200
PMB (DNS)		·		<u> </u>	<u> </u>	
019930-000930 PC	Diffraction Grating With Reduced Polarization-Dependent Loss	Fabiny, Larry	01/22229	7/11/2001		-
PMB (DNS)		Sarto, Tony				
		Muller, Lilac				1
		Arnett, Kenneth E.				
		Pisterf, Kristofer				1

TTC Ref Country	·			Filing	_	_
ATTY(s) Handling	Title	Inventor	Application No.	Date	Patent No.	Issue Date
019930-000940	Difffraction Grating With Reduced	Fabiny, Larry	10/241105	9/10/2002		
US DAR (DNS)	Polarization-Dependent Loss	Sarto, Tony				
PMB (DNS)		<u> </u>	DOT# 1001 (47.555	11/2/2001		
019930-001000 PC DJG PMB (DNS)	Reduction of Polarization-Dependent Loss from Grating Used in Double- Pass Configuration	Fabiny, Larry	PCT/US01/47565	11/2/2001		
019930-001000	Reduction of Polarization-Dependent	Fabiny, Larry	09/706489	11/3/2000		
US	Loss from Grating Used in Double-		'			
DJG PMB (DNS)	Pass Configuration					
	-					
019930-001010	Reduction of Polarization Dependent	Fabiny, Larry	10/076182	2/12/2002		
US	Loss from a Grating Used in Double					
PMB (DNS)	Pass Configuration	İ				
019930-001020	Reduction of Polarization-Dependent	Silveira, Paulo E. X.	10/171434	6/12/2002		
US	Loss in Double Pass Configurations	· ,				İ
PMB (DNS)	·	Sarto, Tony				<u> </u>
		Fabiny, Larry				
		Voitel, Marko				
			(00)(3734	3/11/2002		
019930-001100	Variable Wavelength Attenuator for	Weaver, Samuel P.	60/363724	3/11/2002		
US PMB (DNS)	Spectral Grooming Using Microminor Routing					
		Weener Servel P	PCT/US03/07902	3/11/2003		
019930-001110 PC	Variable Wavelength Attenuator for Spectral Grooming and Dynamic	Weaver, Samuel P.	PC1/0303/07902	3/11/2003		.
,	Channel Equalization Using	Sarto, Andrew W	•]	
PMB (DNS)	Micromirror Routing	<u> </u>				,
019930-001110	Variable Wavelength Attenuator for	Weaver, Samuel P.	10/243924	9/12/2002		
US .	Spectral Grooming Using Micromirror Routing		1			
PMB (DNS)		Sarto, Anthony W.	·,			ļ <u>.</u>
019930-001200 US	Focal Length Disperation Compensation for Field Curvature	Weaver, Samuel P.	09/782882	2/13/2001		
PMB (DNS)	•	Cahill, Raymond F.				
019930-001300	Athermalization of a Wavelength	Wendland Jr., R.G.	01/24242	7/31/2001		
PC	Routing Element		1			
DJG (DNS)	·				· .	<u> </u>
019930-001300	Athermalization of a Wavelength	Wendland Jr., R.G.	09/630817	8/2/2000	6381387	4/30/200
US	Routing Element					
DJG (DNS)					ļ	<u> </u>
019930-001400	Hidden Flexure Ultra-Planar Optical	Michalicek, M. A.	09/859069	5/15/2001		
us	Routing Element				ļ	Ì
RTB (DNS)				· ·		
019930-002000	Optical Routing Elements	Wendland, Jr., R.G.	10/161838	6/3/2002		
US	Option Roaming District			ì	1	
RTB (DNS)			1			
	Method to Reduce Release Time of	Muller, Lilac	60/252784	11/22/2000	 	+
019930-002200 US	Micromachined Devices	, Truinci, Litat	33.232707			
PMB (DNS)	1	Staple, Bevan		Í		
019930-002210	Method to Reduce Release Time of	Muller, Lilac	09/837362	4/18/2001	6525352	2/25/200
US	Micromachined Devices					
PMB (DNS)		Staple, Bevan		1		
. 100 (0113)		1			J	ــــــــــــــــــــــــــــــــــــــ

TTC Ref Country				Filing		
ATTY(s) Handling	Title	Inventor	Application No.	Date	Patent No.	Issue Date
019930-002300 US	Method for Reducing Leaching in Metal-Coated MEMS	Staple, Bevan	09/799916	3/5/2001		
PMB (DNS)	l ·	Miller, David		!		İ
	•	Muller, Lilac	1			
019930-002400 US	Optical Surface-Mount Lens Cell	Anderson, David Paul	09/899013	7/3/2001		
PMB (DNS)						
019930-002500 US	MEMS-Based, Non-Contacting, Free-Space Optical Switch	Staple, Bevan	09/899002	7/3/2001		
PMB (DNS)	1.	Roth, Richard S.	•			
019930-002600	Free-Space Optical Wavelength	Buzzetta, Victor	09/899000	7/3/2001	6535319	3/18/2003
US	Routing Elements Based on Stepwise					
PMB (DNS)	Controlled Tilting Mirrors	Staple, Bevan				
		Marinelli, David				·
019930-002700	Two-Dimensional Free-Space	Buzzetta, Victor	09/899001	7/3/2001		
US	Optical Wavelength Routing Element					
PMB (DNS)	Based on Stepwise Controlled Tilting					
019930-002710	Two-Diminsional Free-Space Optical	Buzzetta, Victor	10/300438	11/19/2002		
US	Wavelength Routing Element Based					
PMB (DNS)	on Stepwise Controlled Tilting Mirrors					
019930-002800 US	Systems & Methods for Overcoming Stiction	Miller, David	10/087040	2/28/2002		
DMH (DNS)		Muller, Lilac				
						•
		Anderson, Robert L.				
019930-003000	Methods & Appartus for Providing a	Anderson, David Paul	09/899014	7/3/2001		
us	Multi-Stop Micromirror	1			,	
DMH (DNS)		•			İ	
		ļ	20/20000	20.000		ļ
019930-003100 US	Systems & Methods for Overcoming Stiction Using a Lever	Anderson, David Paul	09/898988	7/3/2001	-	
	Stiction Using a Devel			1		
DMH (DNS)			İ			
019930-003200	Bistable Mirror with Contactless	Muller, Lilac	09/899004	7/3/2001		
US	Stops		Ì			
PMB (DNS)			İ		'	İ
019930-003500	Micromirror Array Having	Anderson, Robert L.	09/880230	6/12/2001		
US	Adjustable Angles					
PMB (DNS)		Staple, Bevan	1		'	
	1	Roth, Richard S.				
019930-003600 US	Dual-Wave Optical Shared Protection Ring	Wahler, Ronald A.	09/954662	9/12/2001		
PMB (DNS)		Bortolini, Edward J.			1	1
019930-003700 US	Method & Apparatus for Protecing Wiring & Integrated Circuit Device	Anderson, Robert L.	10/216600	8/9/2002		
	, , ,	,				

TTC Ref Country ATTY(s) Handling	Title	Inventor	Application No.	Filing Date	Patent No.	lssue Date
019930-004000	MEMS Die Holder	Roberts, Joseph	09/941325	8/28/2001		
US						
PMB (DNS)		•				
019930-004400	Multimirror Stack for Vertical	Copeland, Frederick	09/941998	8/28/2001	6439728	8/27/2002
US .	Integration of MEMS Devices in Two-Position Retroreflectors	•				
PMB (DNS)						
019930-004500 US	Optical Wavelength Cross Connect Architectures Using Wavelength	Bortolini, Edward J.	10/093844	3/8/2002		
-	Routing Elements	Barthel, Dirk				
PMB (DNS)		Weverka, Robert T.				
		Iraschko, Rainer R.				
			• ,			
		Morley, George D.	DOT# 1503 /07433	1/10/2003		
019930-004510 PC	Optical Wavelength Cross Connect Architectures Using Wavelength	Bortolini, Edward J.	PCT/US03/07422	3/10/2003		
•	Routing Elements and Methods For	Barthel, Dirk				ļ
PMB (DNS)	Performing In-Service U	Weverka, Robert T.				
		Iraschko, Rainer R.				
		Morley, George D.			· .	1
			10/270300	10/72/2002		
019930-004510 US	Optical Wavelength Cross Connect Architectures Using Wavelength	Weverka, Robert T.	10/279388	10/23/2002		
	Routing Elements					
PMB (DNS)	Wester oth Poster with a	Fabiny, Larry	09/992087	11/12/2001		
019930-005500 US	Wavelength Router with a Transmissive Dispersive Element	raumy, Lamy	03/772007	''''		
PMB (DNS)		,				Ì
			Ì	,		
019930-005600	High Efficiency, Low Polarization	Fabiny, Larry	09/992849	11/12/2001		
US	Depdendent Loss, Lamellar	, 100),,				
PMB (DNS)	Diffraction-Grating Profile & Production Process	Arnett, Kenneth E.				·
019930-005700	Survivable Ring Transmission	Iraschiko, Rainer R.	10/118070	4/5/2002		
US	System with Multiple Protection					
PMB (DNS)	Classes	MacGregor, Michael				1
· .		H Morley, George David				
		Stamatelakis, Demetr			'	
		İ				1
		Wahler, Ronald A.	10,000,707	2/12/2002		<u> </u>
019930-005800 US	One-to-M Wavelength Routing Element	Cizek, Nicholas C.	10/099392	3/13/2002		
PMB (DNS)		Weaver, Samuel Paul				
019930-005900	Two-By-Two Wavelength Routine	Cizek, Nicholas C.	10/098805	3/13/2002	 	-
US	Element Using One Two- Position					
G2B PMB (DNS)	MEMS Mirrors					
				1		
019930-006000	Method for Sub Network Connection	Weverka, Robert T.	10/306826	11/26/2002		
US	Protection in All Optical Networks					
RCL (DNS)		1		1	1	_

TTC Ref Country ATTY(s) Handling	Title	Inventor	Application No.	Filing Date	Patent No.	Issue Date
019930-006100 US	Methods for Affirming Switched Status of MEMS Based Devoies	Staple, Bevan	10/080789	2/21/2002		
PMB (DNS)		Anderson, Robert L.			-	!
019930-007300 PC	Tunable DWDM Demultiplexer	Christopher S., Alaimo	PCT/US03/07899	3/11/2003		
PMB (DNS)		Bortolini, Edward J.				
	.·	DeFrancesco, Marc			' 	
		Honea, Keith		:		
		Marinelli, David	:			
		Mechels, Steven	,			
	`	Rice, James	·			
		Weverka, Robert T.				
		Kiruluta, Andrew J. M.				,
		Wood, Christopher Stephen				
		Kaliskl, Robert W.				
019930-007300 US	Tunable DWDM Demultiplexer	Christopher S., Alaimo	10/095794	3/11/2002		
PMB (DNS)		Bortolini, Edward J.				
		DeFrancesco, Marc				,
		Honea, Keith				
		Marinelli, David				
	·	Mechels, Steven				
		Rice, James				
		Weverka, Robert T.			•	
		Kiruluta, Andrew J. M.			,	
019930-007500 US PMB (DNS)	Methods for Performing In-Service Upgrades of Optical Wavelength Cross Connects	Bortolini, Edward J.	10/093843	3/8/2002		
019930-007900 US	Bidirectional Wavelength Cross- Connect Architectures Using	Bortolini, Edward J.	.10/150810	5/17/2002		
PMB (DNS)	Wavelength Routing Elements	Barthel, Dirk		*		
•	,	Weverka, Robert T.				
		Weaver, Samuel Paul	ļ			
	}	Silveira, Paulo E. X.	·			1
019930-008000 US	Multi-City DWDM Wavelength Link Architectures & Methods for	Alaimo, S.Christophe	10/126189	4/19/2002		
PMB (DNS)	Upgrading	Barthel, Dirk				
		Morley, George David				
		Bortolini, Edward J.		·		
		Urie, Richard W.				
019930-008100 US PMB (DNS)	Optical Routing Mechanism With Integral Fiber Input/Output Arrangement on MEMS Die	KAPLAN, MICHAEL	10/401416	3/28/2003		

TTC Ref Country ATTY(s) Handling	Title	Inventor	Application No.	Filing Date	Patent No.	Issue Date
019930-008200 US	Variable-Density Optical Cross Connect Architectures & Upgrades	Weverka, Robert T.	10/147181	5/15/2002		
PMB (DNS)		Bortolini, Edward J. Urie, Richard W. Clark, Phillip	,			
019930-008300 US PMB (DNS)	Surfactant-Enhanced Protection of Micromechanical Components from Galvanic Degradation	Staple, Bevan	10/242213	9/12/2002		·
019930-008400 US PMB (DNS)	Floating Entrance Guard for Preventing Electrical Short Circuits	Miller, David	10/262404	9/30/2002		
019930-008800 US PMB (DNS)	Equipment Monitoring Techniques for Optical Switching & Wavelength Switching Devices & Systems		,			